UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

Date: December 20, 2005

Subject: Removal Site Evaluation for the Roselle Park Youth Baseball Fields Site, Roselle Park Union County, New Jersey

From: Dave Rosoff, On-Scene Coordinator
Removal Action Branch

To: File

Site I.D. No.: NJSFN0204259
REMOVAL ASSESSMENT RANKING: 8

I. INTRODUCTION

The Removal Action Branch (RAB) received a request from EPA's Pre-Remedial program in June 2005 to evaluate the Roselle Park Youth Baseball Fields Site (Site) for removal action eligibility (Appendix A). The Site is located at 180 West Webster Avenue in a residential area in the Borough of Roselle Park, Union County, New Jersey (Figure 1). The Site is currently owned by the Borough of Roselle Park and operated by the Roselle Park Youth Baseball League. Reportedly the Site was used as a trash disposal and burn area in the 1950s prior to the construction of the fields. Currently, the Site is an active municipal baseball facility with two fields (Wolf and Adase), spectator stands, a clubhouse and a small food concession.

There has been a release of CERCLA designated hazardous substances at the Site, which is defined as a facility under section 101(9) of CERCLA. Elevated levels of lead are present in surface soils of the outfield on the Wolf Field and in the near surface soils of both fields. In addition, a release of volatile organic chemicals (VOCs) has been documented in the subsurface beneath the infield of the Adase Field. Children participating in baseball and softball activities at the Site may be exposed to lead in the surface soil. An ATSDR Health Consultation (10/25/05) determined that the concentrations of lead in the surface soils on the Wolf Field are likely to pose a health concern for unprotected children utilizing the property for recreational purposes. Based on the available information, a CERCLA Removal Action is warranted at the Site.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Physical location

The Site is located at 180 West Webster Avenue and occupies Block 506, Lot 1 in the Borough of Roselle Park (Figure 2). The two-acre Site consists of two ballfields, paved parking area, snack bar, spectator stands and a clubhouse. The Site is bounded to the north by West Webster Avenue and Roselle Park High School across the street; to the south by NJ Transit railroad tracks; to the east by a building supply company; and to the west by the Roselle Park DPW facility. The Webster Garden Apartments complex is located just west of the DPW facility.

2. Site history/characteristics

The Site is utilized by "little league age" boys and girls youth softball leagues and is not used by the Roselle Park High School. During the spring, summer and early fall the fields are used daily for practice and games. During this time the fields are heavily utilized by hundreds of children. The fields are not well maintained, especially the outfields, and tend to be slightly hummocky with numerous locations of missing turf and exposed soil. The outfield surface and near surface soils consist of poor quality industrial fill material (3 to 5 feet thick) and the infield surface is made up of 6 to 10 inches of compacted infield sand on top of this industrial fill. The fields do have a subsurface irrigation system used for watering.

On November 12, 1998 EPA received a letter (dated November 7, 1998) from a concerned citizen regarding a history of foul odors emanating from the ground at the Site (Appendix B). The letter, written by the former Vice Chairman of Recreation for the Borough, described a history of the property that included its use as a "town dump" where "drums of industrial by-products were discarded over the years". One defunct company, Karagusean Brothers linoleum manufacturing company formerly located on Route 28 in Roselle Park, was implicated in the letter as the owner and disposer of drums of waste at the Site. The letter also described an incident that occurred during the construction of one of the dugouts in the early 1980s where oily waste and refuse was unearthed during excavation. In response to this letter EPA's Pre-Remedial program conducted a Preliminary Assessment (PA) of the Site which confirmed the property's use as the town dump and the site of an incinerator used to burn leaves until 1957.

The Site is underlain by glacial moraine deposits within the Piedmont Physiographic Province of New Jersey. The water table is approximately 15 feet below ground surface at the Site but the surface aquifer in unconsolidated glacial sediments is not utilized for water supply in Union County due to its low permeability. The Brunswick formation which underlies the glacial deposits is considered the most utilized aquifer resource in the County. Water in this formation occurs in joints and fractures and can be confined or unconfined depending on location. In the area of the Site, silt and clay beds confine the groundwater in underlying rocks and locally artesian conditions result. The direction of groundwater flow beneath the Site is unknown. The

nearest domestic water supply well is located 0.58 miles southeast of the Site. The depth of this well is 107 feet. About 75,000 people utilize public water drawn from wells within 2 miles of the Site. However, this water is blended with surface water by the Elizabethtown Water Company prior to distribution. There are no monitoring wells on the property and there has been no groundwater investigation of the Site.

Although the nearest downslope surface water, Morses Creek, bisects the Site, it is channeled through a culvert under the Site and appears to be inaccessible to contaminant migration from the Site.

3. Previous work relevant to this RSE

EPA completed a PA on October 7, 1999 and conducted Site Inspection (SI) sampling events at the Site on May 15, 2000 and August 29, 2001. A SI report documenting this work was finalized in December 2001. The SI field activities included the collection of surface soil samples from the baseball fields and soil gas from beneath the fields. The results of the analyses of these samples revealed elevated lead concentrations in the outfield of the Wolf Field and low level VOC concentrations in the soil gas from beneath the infield of the Adase Field. Despite the discovery of this contamination, the overall Site PreScore was only 23.51, below the threshold to qualify the Site for the NPL. As a result, EPA's Pre-Remedial Program recommended this Site for NFRAP. However, the discovery of elevated lead in the outfield of the Wolf Field resulted in the Site being referred to the Removal Program for further evaluation.
Both ATSDR (in a January 19, 2001 Technical Assistance Memorandum) and EPA Region II toxicologists (in a January 2004 Human Health Risk Assessment) evaluated the SI data. Additional data collected during this RSE was further evaluated by ATSDR in a Health Consultation dated October 15, 2005 (Appendix C).

4. Site assessment activities/observations

Field work for this RSE was conducted in 2 phases. The first phase in August 2005 consisted of surface soil sampling and analysis (XRF in the field with lab confirmation) for metals, geophysical investigation of the subsurface and soil gas sampling for VOCs. This sampling was effective in determining the lateral extent of surface contamination at the Site (Figures 3a and 3b and Table 1). A second phase of sampling took place in October 2005 and utilized the data from phase one to pinpoint 12 borings using geoprobe technology. Subsurface samples (analyzed for lead using XRF with laboratory confirmation) were collected from the cores to determine the vertical extent of contamination (Figure 4, Table 2).

Coring at the Site has confirmed the presence of a 3 to 5 foot thick layer of industrial fill (ash, cinders, glass, brick, ceramic, coal and garbage) beneath the fields. This fill layer reaches the surface on the Wolf Field and is within 8 inches of the surface on the Adase Field. Based on surface soil sampling on the Wolf Field the fill has lead concentrations as high as 3,700 ppm and levels over 1,000 ppm are located throughout the entire outfield surface (infield is covered with 8 to 10 inches of infield dirt). The surface soil samples on the Adase Field are below 400 ppm

lead mainly because surface sampling did not access the industrial fill but a clay and topsoil layer above it (8 inches to 1.5 feet thick). Sample results of the subsurface soil indicates lead levels in the industrial fill of up to 14,900 ppm (in the 1 to 2 foot BGS interval).

The outfields are not in good condition and have numerous exposed dirt spots so the potential for exposure to the contaminated dirt does exist. The Site is completely fenced in and has three large vehicle gates that open to the fields and three pedestrian gates that open to the common area or the stands. All of the gates are locked when the field is not in use.

In addition to the lead contaminated soil, soil gas and subsequent geoprobing located a BTEX subsurface contamination area below the infield of Adase Field. The source of the BTEX is unknown. It was originally identified using soil gas techniques during the first phase of the assessment in August 2005 (Figure 5, Table 3). A follow-up boring in the Adase field infield into the soil below the industrial fill layer revealed extensive organic contamination (fuel like odors) from 6 feet down to 12 feet below ground surface (BGS) and below (the bottom of the core was 12 feet and the extent of the contamination was not determined). Samples that were collected showed elevated levels of BTEX (toluene at 79 ppm, xylene at 252 ppm, ethylbenzene at 45 ppm and benzene compounds {trimethylbenzene} at 159 ppm). The VOC contamination seems to be associated with liquid migrating within silty layers in the native soil below 5 feet BGS.

5. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Lead is designated as a CERCLA hazardous substance under 40 CFR Table 302.4. Lead was found in soils at the Site at concentrations up to 14,900 ppm. The statutory source for designation of lead as a hazardous substance is RCRA §3001. The areas of exposed surface soil contamination are within outfield of the Wolf Field which is currently being used by young children for recreation.

In its October 25, 2005 Health Consultation, ATSDR states that the concentrations of lead in the surface soil of the Wolf Field is likely to be of a health concern for children, especially girls playing on the field that are of child bearing age. ATSDR recommended that recurring exposures to the surface soils of the Wolf Field be minimized or eliminated.

It is generally known that elevated levels of lead in soil can pose a public health threat, especially to children 8 years old and younger. Children at this age are more likely to ingest large amounts of soil relative to body weight, and have developing nervous systems that are susceptible to the deleterious effects of lead. Since lead readily crosses the placental barrier, exposure of women to lead during pregnancy results in uptake by the fetus. Pre-natal exposure to lead is associated with premature delivery, decreased birth weight, impaired postnatal neuro-behavioral development, and decreased postnatal growth rate. The Centers for Disease Control and Prevention has reported that blood lead levels in young may be raised, on average, about 5 micrograms per deciliter (ug/dL) for every 1,000 ppm of lead in soil or dust, and may increase 3

to 5 times higher depending on play habits and mouthing behavior. Blood lead levels of 10 ug/dL and above have been associated with adverse health effects such as reductions in intelligence quotient in children.

Subsurface sampling and soil gas sampling has confirmed a release of VOCs into the subsurface environment beneath the infield of the Adase Field. The VOCs detected include trimethylbenzene, propylbenzene, ethylbenzene, toluene and xylene. These contaminants may be associated with an old fuel spill and are found at about 6 feet BGS and below.

1. NPL Status

The Site is not presently on the NPL, nor are there current efforts to include this Site on the NPL.

2. Maps, Pictures or Other Graphic Representations

Please refer to Figure 1 for the Site location; Figure 2 for Site layout; Figures 3a, 3b, 4 and 5 for RSE sample locations and results. Tables 1 through 3 contain the analytical results from the samples collected during the RSE.

III. THREATS TO PUBLIC HEALTH WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to the Public Health or Welfare

Conditions at the Site meet the requirements of Section 300.415(b) of the National Contingency Plan (NCP) for the undertaking of a CERCLA removal action. Factors from the NCP Section 300.415(b)(2) that support conducting a removal action at the Site include:

(i) Actual or potential exposure to nearby human populations, animals, of the food chain from hazardous substances, or pollutants, or contaminants;

There is a potential exposure to hazardous substances by nearby populations from hazardous substances **(§300.415(b)(2)(i))**. Elevated levels of lead, a CERCLA designated hazardous substance, are present in soil exposed at the surface in the outfield of the Wolf Field. The field is used on a regular basis by local youths for recreation and the same children frequent the field on a repeated basis for games and practices. These children are susceptible to exposure to lead in the surface soil on the Site. Children are particularly vulnerable to lead contamination since they can ingest large amounts of soil relative to body weight, and their nervous systems are susceptible to the effects from lead. Concentrations of lead found on the current ground surface are of a health concern to children utilizing the Site according to ATSDR's October 25, 2005 Health Consultation.

Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Symptoms include decreased physical

fitness, fatigue, sleep disturbance, aching bones, abdominal pains and decreased appetite. Lead is a powerful systemic poison. Ingestion and inhalation of large amounts may lead to seizures, coma, and death. Long-term exposure can result in severe damage to the brain, blood-forming organs, and the nervous, urinary and reproductive systems.

(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate; and

There are high levels of hazardous substances in soils at or near the surface that may migrate **(§300.415(b)(2)(iv))**. The analytical results from EPA's August 2005 soil sampling event revealed lead-contaminated soils at the ground surface (0 to 3 inches) which exhibit contamination as high as 3,700 ppm. Additional samples collected by EPA in October 2005 revealed much more significant subsurface lead contamination at 1 foot BGS and deeper (up to 14,900 ppm lead in the near surface soils). The lead contamination discovered is clearly associated with a 3 to 5 foot thick industrial fill layer present beneath both fields. This fill layer is exposed at the surface in the Wolf Field outfield. The contaminated soil on the surface may become mobile through storm events (i.e., wind, rain) and may also be spread from contaminated areas to other (non-contaminated) areas through "tracking" of the soil by children utilizing the fields to play baseball and softball.

(vii) The availability of other appropriate federal or state response mechanisms to respond to the release;

There are no State or local response actions expected to mitigate the threats to public health or the environment on the Site.

B. Threats to the Environment

Sampling conducted during this RSE has documented a VOC release to the subsurface environment beneath the Adase Field. This VOC contamination may be a threat to the near surface aquifer. Further study of this release is needed to determine its extent and magnitude of impact to the environment.

IV. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Failure to address the lead contaminated surface soils at the Site will result in a continued recurring potential for exposure to the contamination by children utilizing the facility.

V. CONCLUSIONS

The elevated levels of lead in the surface soils on the Site pose a health threat to unprotected children repeatedly exposed to the dirt in the outfield. ATSDR has recommended that these exposures be minimized or eliminated to protect public health.

The Site is considered a facility as defined by Section 300.5 of the NCP. A release of hazardous substances has occurred on the Site in a quantity and concentration that has resulted in a substantial threat to the public health and the environment. There is a current exposure pathway existing to humans and the environment that may present an imminent and substantial endangerment and no other party, government or otherwise, is currently taking a timely response action to mitigate the threat.

cc: Richard Salkie, RAB
John Witkowski, RAB
Joe Rotola, RAB
Jim Daloia, RPB
George Zachos, Site Assessment Manager

APPENDIX A

June 7, 2005 Referral Letter from EPA Pre-Remedial Roselle Park Youth Baseball Fields Site

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

June 7, 2005

Ms. Arlene M. Triano, R.M.C.
Borough Clerk
Borough of Roselle Park
110 Westfield Avenue
Roselle Park, New Jersey 07204-2083

Re: Roselle Park Baseball Fields

Dear Ms. Triano,

As you are aware, the U.S. Environmental Protection Agency (EPA) has been conducting an investigation at the above referenced site as a result of a petition the EPA received from a local citizen. We conducted both a Preliminary Assessment (PA) and Site Inspection (SI) at this site; these are preliminary investigations EPA conducts at sites potentially impacted by hazardous wastes. The investigations revealed elevated levels of lead and Polycyclic Aromatic Hydrocarbons (PAHs) in two soil samples taken from the Wolf and Adase Fields. Both lead and PAHs are common contaminants associated with industrial practices. Additional soil samples were then taken to assess any potential health concerns posed by direct contact with the soil.

Results of the additional soil samples have been collected and analyzed by an EPA risk assessor to determine if there are any potential human health risks associated with using the site as a ballfield. Soil samples revealed no elevated risks to human health connected with this site and that it can continue to be used as a ballfield. However, lead concentrations from four samples collected in the area of the Wolf Field outfield were found to be above New Jersey's Residential Soil Cleanup Criteria, which may indicate the presence of a "hot spot" of lead contamination.

I have referred the site to the EPA Removal Program for further evaluation. The Removal Program will conduct some additional sampling at the site to define the extent of the hot spot and determine if any further action is required. EPA's Removal Program addresses these types of conditions commonly, and should be able to complete the evaluation quickly. David Rosoff, an On Scene Coordinator (OSC) with the Removal Program, will be in contact with you to discuss the next course of action at the site. The Site Inspection report and the Human Health Risk Assessment are available if you should want copies. If you have any questions please feel free to contact me at (212) 637-4328, or David Rosoff at (732) 906-6879.

Sincerely,

Kristin Dobinson, Site Assessment Manager
Pre-Remedial Section

cc: Donald Guarriello, Borough Engineer
Mr. Ken Marciano, Roselle Park Youth Baseball League
Mr. David Rosoff, OSC, USEPA

APPENDIX B

November 7, 1998 Concerned Citizen Letter
Roselle Park Youth Baseball Fields Site

Peter A Strahan

428 Sheridan Avenue
Roselle Park, New Jersey 07204-2139

Phone 908-687-3542
Fax (908) 245-2875
Home Phone (908) 245-7344
Email STRFAM428@AOL.COM

The Museum
re: cancellation

November 7,1998

EPA Main Regional Office
290 Broadway-26th Floor
New York,New York 10007-1886

Response due 11/21/98 Answer Reply

Dear Sirs:

During late July of this year I was coaching a 12 year old girls softball team. Playing on the Roselle Park Youth Baseball League fields as I have done for over the past 10 years. On this particular day which was extremely hot one of my players in the outfield complained of nausea and a headache.At first I thought nothing of it.My first notion that it was just from the heat.When I questioned her she told me there was a terrible smell in the field.She was correct but I still thought nothing of it because the D.P.W yard was nearby.

Being Vice- Chairman of Recreation in the Borough for 4 years I have heard many complaints from parents regarding odors at this site.But the baseball league is a private corporation and not associated with the town Recreation Department.,and I told these people to contact that organization directly.

After the game was over and elderly gentleman who saw what had happened came over to me and told me that the smell was coming from the old city dump which was buried underneath the field. That he had worked here in the 1950's and he knew what he was talking about.He was not to happy about his granddaughter playing there under the current conditions.

I didn't give this matter a second thought until recently when I was at a local street fair and I was looking through an exhibit of town history I discovered that yes this older gentleman certainly was correct.The Youth Baseball field was constructed over the old town dump in the late 1950s

I did some research and found out by talking to a matenance man who works on the fields for the board of education Carmine Albanese that yes the Roselle Park Youth Baseball fields were built over the old dump.Then in speaking to a retired D.P.W worker (who wanted to remain nameless) that the old town dump was the site where many drums of industrial by-products were discarded over the years.That these drums were filled with some type of waste liquid which had been deposited there periodically by a now defunct company named Karagusean Bros.on Rt. 28 in Roselle Park which he thought made carpet or linoleum. In further investigation I discovered in talking to Dan Petrosky a former coach of over 18 years that he was in charge of Buildings and Grounds at the field when a dugout was constructed apx. 15 years ago . At that time when they dug below the few feet of clay ,the ground became black and oily and all types of refuse was unearthed.

Wary of speaking with baseball officials who I was afraid would either cover up this matter or fail to act on it.I decided to contact your agency.

I am terrified of the thought that there could be barrels of toxic waste buried here rotting and releasing their poisons into the groundwater and into the atmosphere.Possibly exposing our innocent children to deadly carcinogens. Please tell me how the people of this community can be sure this site is safe for the over 500 youth baseball players to start playing baseball in the spring.

Sincerely,

Peter A. Strahan, A concerned parent,coach,and citizen

US EPA
1998 NOV 12 PM 4:52
OPM/PPEB

APPENDIX C

October 25, 2005 ATSDR Health Consultation
Roselle Park Youth Baseball Fields Site

Name:
ERS LOG #:

ATSDR Record of Activity ROUTING:

J. Holler M. Allred
ERS FILES

UID #: RAN2 Date: 10/25/2005 Time: @ am @ pm @

Site Name: Youth Baseball Site City: Roselle Park Cnty: Union State: NJ

CERCLIS #: _____ Cost Recovery #: _ Region: 02

Site Status (1) _ NPL X Non-NPL _ RCRA _ Non-Site specific _ Federal
(2) _ Emergency Response _ Remedial X Other: Removal

Activities

_ Incoming Call _ Public Meeting* _ Health Consult* _ Site Visit*
_ Outgoing Call _ Other Meeting _ Health Referral _ Info Provided
X Conference Call X Data Review _ Written Response _ Training
_ Incoming Mail _ Other :

Requestor and Affiliation: (01) Dave Rosoff, OSC
Phone: 908-420-4465 Address: EPA Region II
City: Edison State: NJ Zip Code: _____

Contacts and Affiliation

(31) L. Escobar, ATSDR II ( )_____
( )_____ ( )_____

1-EPA	2-USCG	3-OTHER FED	4-STATE ENV	5-STATE HLT
6-COUNTY HLTH	7-CITY HLTH	8-HOSPITAL	9-LAW ENFORCE	10-FIRE DEPT
11-POISON CTR	12-PRIV CITZ	13-OTHER	14-UNKNOWN	15-DOD
16-DOE	17-NOAA	18-OTHR STATE	19-OTHR COUNTY	20-OTHR CITY
21-INTL	22-CITZ GROUP	23-ELECT. OFF	24-PRIV. CO	25-NEWS MEDIA
26-ARMY	27-NAVY	28-AIR FORCE	29-DEF LOG AGCY	30-NRC
31-ATSDR				

Program Areas

_ Health Assessment _ Health Studies _ Tox Info-profile _ Worker Hlth
_ Petition Assessment _ Health Surveilnc _ Tox Info-Nonprofil _ Admin
_ Emergency Response _ Disease Regstry _ Subst-Spec Resch _ Other
X Health Consultation _ Exposr Regstry _ Health Education

Narrative Summary:

ATSDR II contacted ATSDR/DTEM on October 17th and indicated that an EPA/OSC was requesting review of some environmental data from a baseball field complex, which includes two baseball fields, in Roselle Park, NJ. Reportedly the field has been built over a former dump area. XRF readings for lead in the ball fields ranged up to nearly 3000 ppm and corresponding lab data for lead ranged to 3700ppm. Both fields are used by the boys little league and the girls softball teams. The girls range in age from 12-15 YOA while the boys would be 8-12 years old. ATSDR II faxed the data package to ATSDR/HQ. (See attached)

On 10/25, a conference call between ATSDR/DTEM, ATSDR II, and the EPA/OSC was held to discuss the data. During the call, the OSC indicated that additional subsurface sampling had been done. EPA identified the presence of a 3 to 5 foot thick layer of industrial fill (ash, cinders, glass, brick, ceramic, coal and garbage) beneath the fields. This fill layer reaches the surface on the Wolf Field and is within 8 inches of the surface on the Adase Field. Based on surface soil sampling on the Wolf field the fill has lead concentrations as high as 3,700 ppm and levels over 1,000 ppm are located throughout the entire outfield surface (infield is covered with 8 to 10 inches of infield dirt). The surface soil samples on the Adase field are below 400 ppm lead possibly due to the samples being collected from a clay and topsoil layer above the industrial fill (about 8

inches to 1.5 feet thick) and not from the industrial fill itself.

ATSDR II described briefly a prior consultation/technical assist on this site from 2001 and provided a copy to ATSDR/DTEM (copy attached). This described the history of the site back through the initial complaint in 1999.

Action Required/Recommendations/Info Provided:

ATSDR reviewed the data package. Contamination at the surface of the Adase ball field ranges from 60 ppm of lead up to 414 ppm of lead. Contamination at the surface of the Wolf ball field ranges from 36 ppm of lead (107 ppm inside the fence) up to 2970 ppm of lead. All sample points show at least some lead contamination, as might be expected of older essentially urban areas. However, the areal extent of lead contamination approaching or exceeding 1000 ppm in the Wolf ball field is extensive; exposure would likely be difficult to avoid under normal usage of the fields. While no TCLP data is available on the fill material discovered by EPA in the subsurface and surface soils of the recreational facility, the description of the industrial fill by EPA indicates that there is little in the fill to bind the lead. This suggests that the lead may be fairly bioavailable.

Surface contamination of lead in the Adase ball field was generally below levels expected to cause adverse health effects under the transient exposures likely in a recreational setting. However, based on the subsequent findings of EPA, this surface soil is not characteristic of the underlying soils. The concentrations of lead in the surface soils of the Wolf ball field is likely to be of health concern, especially as the girls playing on these fields are of child bearing age. (According to statistics from the National Center for Health Statistics, mothers under the age of 15 accounted for over 6000 live births in 2003 and mothers in the 15-19 age group accounted for approximately 10% of all live births that year in the U.S.)

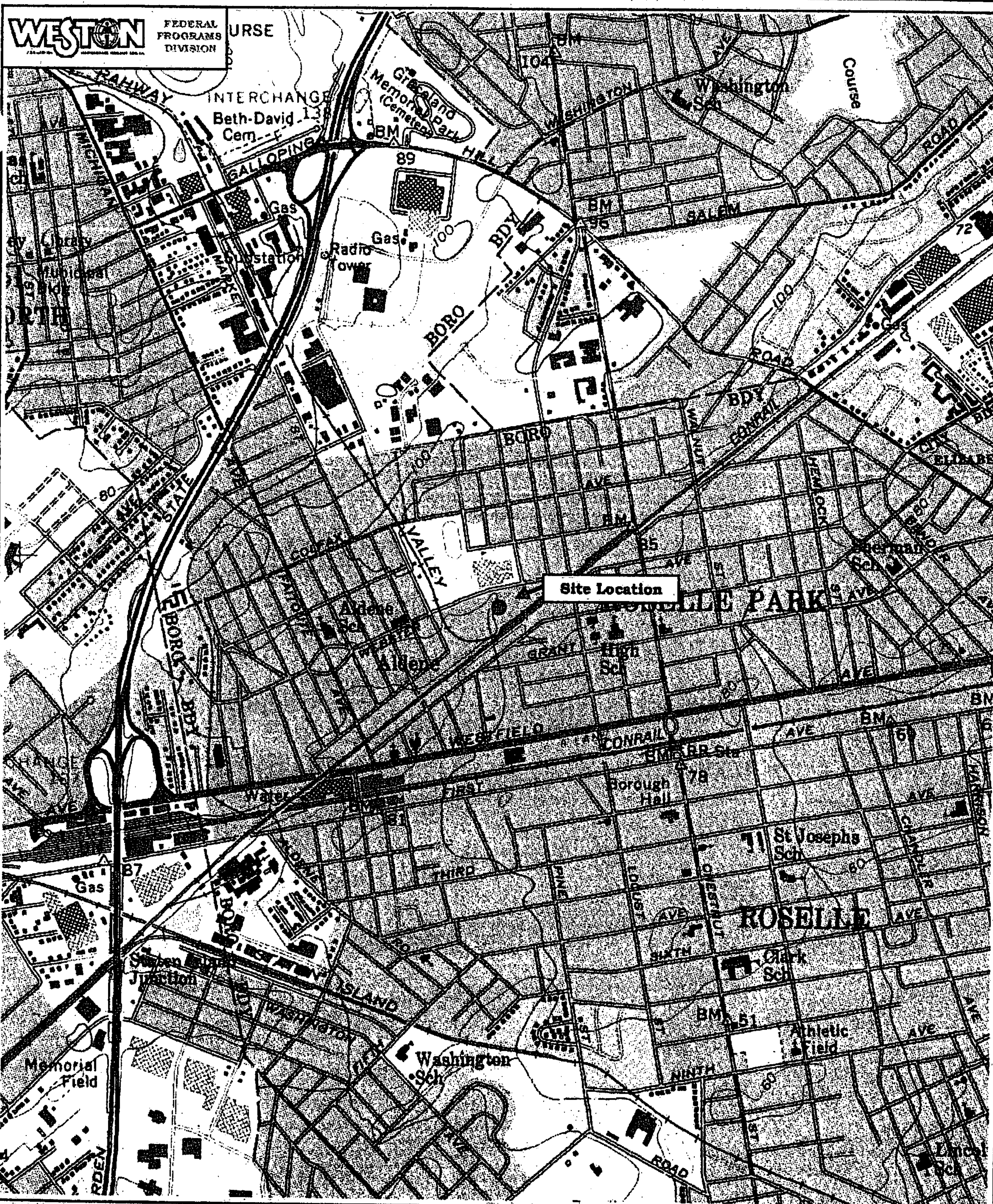
Name:
ERS LOG #:

ATSDR recommends that recurring exposures to the surface soils of the Wolf ball field be minimized or eliminated. Further characterization of the subsurface at the recreational facility should be considered. To the extent that the association between the high lead levels and the industrial fill is confirmed by the pending analytical data, a soil and vegetative cover over this fill should be maintained on both ball fields. As additional information on the recreational facility is obtained, ATSDR is available to review the data and recommend further protective measures.

Signature: Richard A. Nickle Date: 10/31/2005

Enclosures: Yes (X) No ( ); MIS entered: Yes (X) No ( )

cc: ATSDR Region
State HA Coop. Coord.



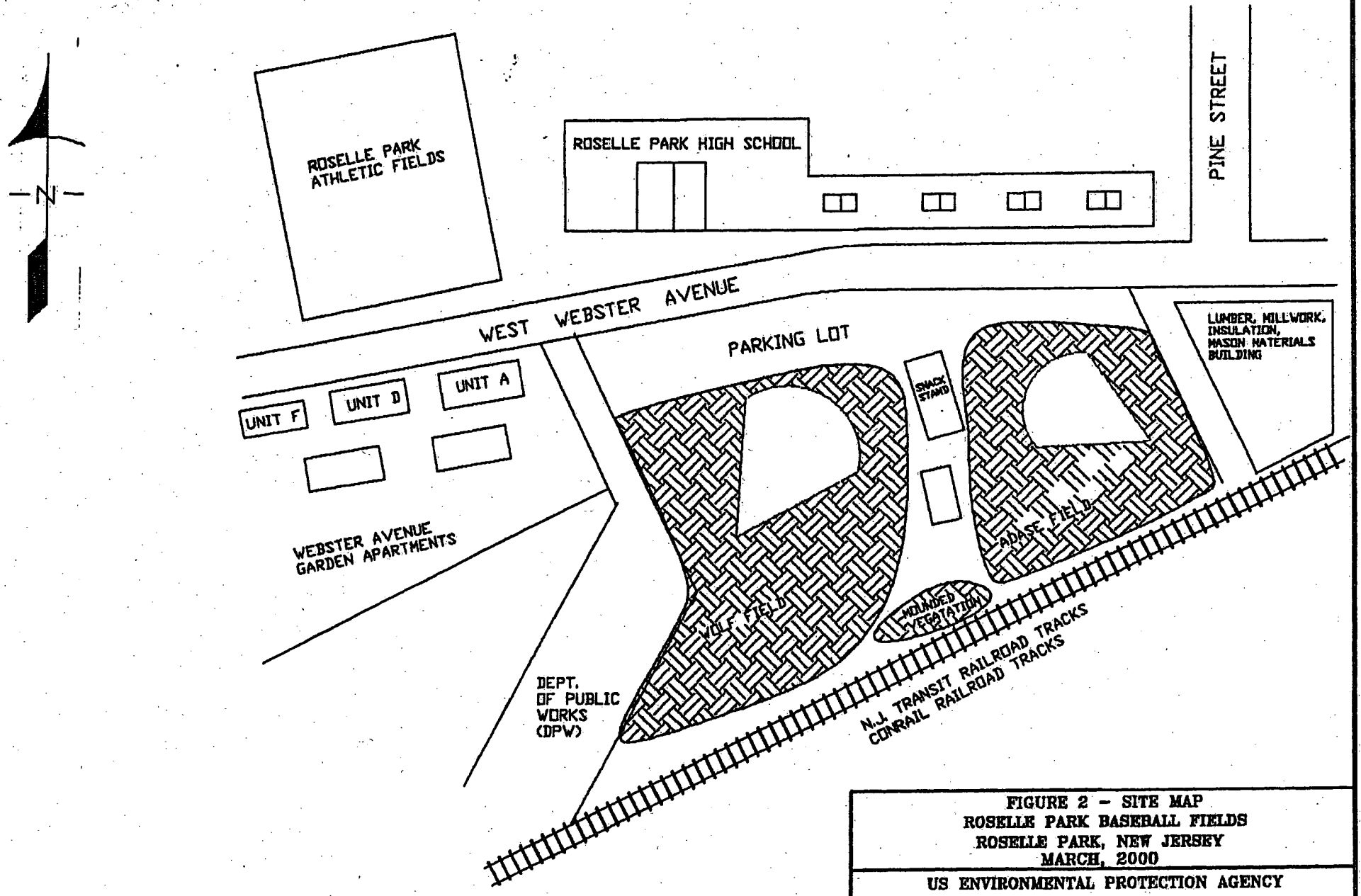
OURCE: USGS 7.5 Minute Series (Topographic) uadrangles: Roselle, NJ-NY, 1955, photorevised 1981; Perth Amboy, NJ-NY, 1956, photorevised 1981; Arthur Kill, NY-NJ, 1966, photorevised 1981; Elizabeth, NJ-NY, 1967, photorevised 1981.

Date: 9/14/00

Scale in Feet

600 0 600 1200

Figure 1
Site Location Map
Roselle Park Baseball Fields
Roselle Park, Union County, NJ



- DRAWNING NOT TO SCALE -

FIGURE 2 - SITE MAP
ROSELLE PARK BASEBALL FIELDS
ROSELLE PARK, NEW JERSEY
MARCH, 2000

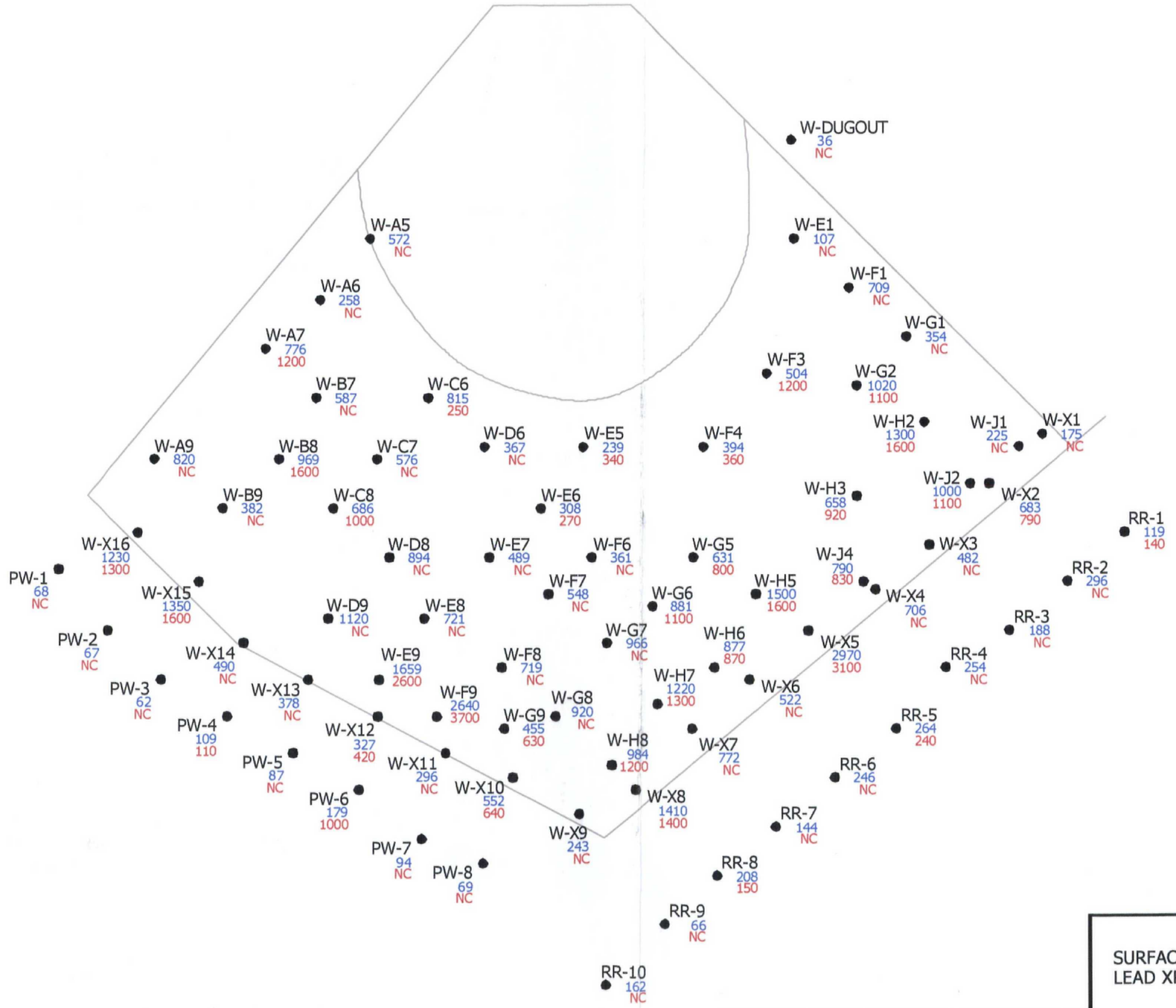
US ENVIRONMENTAL PROTECTION AGENCY
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
CONTRACT# 68-W5-0019

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH TETRA TECH EMI, INC., C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC., R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

DRAWN BY : J. L. HAMPTON JR.
EPA TASK MONITOR: C. MOYIK
START PROJECT MANAGER: S. SNYDER

D:\DWG\6577A.DWG



U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
EP-C-04-032
W.A.# 0 - **161**

FIGURE 3A
SURFACE SOIL SAMPLING LOCATION MAP AND
LEAD XRF/LABORATORY ANALYTICAL RESULTS
WOLF FIELD
JULY 2005
ROSELLE PARK YOUTH FIELDS
ROSELLE PARK, NEW JERSEY

12/15/05

J:\REAC4\161\FIGURE3A.DWG

A3TEMP			
DEPTH (ft)	XRF	CONF.	CONF. RL
(2-3)	193	207	0.990
(3-4)	532	NA	NA
(6-7)	25 U	NA	NA
(9-10)	25 U	NA	NA
(11-12)	25 U	NA	NA

WIF			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	77	NA	NA
(2-3)	520	NA	NA
(2-3)D	1180	NA	NA
(3-4)	120	NA	NA
(4-5)	1210	1320	1.00
(5-6)	87	NA	NA
(5-6)D	52	NA	NA

A1TEMP			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	390	NA	NA
(1-2)D	224	NA	NA
(2-2.5)	1220	NA	NA
(6-7)	55	51.7	5.00

A2TEMP			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	511	525	0.980
(2-3)	767	NA	NA
(3-4)	114	NA	NA

WB8			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	2280	1690	5.00
(2-3)	3390	NA	NA
(5-6)	252	NA	NA
(7-8)	25 U	NA	NA

WF3			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	2150	3140	1.00
(2-3)	445	NA	NA
(5-6)	49	NA	NA
(5-6)D	43	NA	NA
(7-8)	25 U	NA	NA

WX15			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	6320	14900	0.990
(2-3)	2120	NA	NA
(3-4)	1090	1040	4.95

WX5			
DEPTH (ft)	XRF	CONF.	CONF. RL
(2-3)	8070	11000	5.00
(3-4)	3740	NA	NA
(5-6)	48	NA	NA

WH2			
DEPTH (ft)	XRF	CONF.	CONF. RL
(2-3)	2430	NA	NA
(3-4)	1780	1660	1.00
(3-4)D	1260	NA	NA
(5-6)	58	NA	NA

WF9			
DEPTH (ft)	XRF	CONF.	CONF. RL
(2-3)	538	NA	NA
(5-6)	120	98.7	5.00
(6-7)	25 U	NA	NA

WH8			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-2)	2580	3410	1.00
(1-2)D	2260	NA	NA
(2-3)	1590	NA	NA
(3-4)	153	NA	NA
(4-5)	549	NA	NA
(6-7)	25 U	NA	NA

WE6			
DEPTH (ft)	XRF	CONF.	CONF. RL
(1-1.5)	71	NA	NA
(1.5-2)	29	15.6	0.990
(3-4)	674	691	1.00
(3-4)D	693	717	1.00
(5-6)	75	NA	NA
(7-8)	25 U	NA	NA

Adase

Wolf

A3TEMP

A1TEMP

A2TEMP

IF

WF3

WH2

WB8

WE6

WX15

WX5

WF9

WH8

LEGEND

WH2 ● SOIL SAMPLE LOCATION

RL = REPORTING LIMIT

U = NOT DETECTED ABOVE RL; RL IS PRESENTED

NA = NOT ANALYZED

ALL RESULTS IN mg/kg

RL FOR ALL XRF ANALYSES WAS 25 mg/kg

PRELIMINARY RESULTS. DATA NOT VALIDATED

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
EP-C-04-032
W.A.# 0 - 161

FIGURE 4
SURFACE SOIL SAMPLING LOCATION MAP AND LEAD XRF/CONFIRMATION ANALYTICAL RESULTS OCTOBER 2005 ROSELLE PARK YOUTH FIELDS ROSELLE PARK, NEW JERSEY

J:/REAC4/161/DSC_REPORT_2005/DEC/MAP_origin_DSC.dwg 12/20/05

LEGEND

A-C7 — SAMPLE LOCATION
254 — XRF RESULT
220 — LABORATORY RESULT

NC = NOT COLLECTED

ALL RESULTS IN mg/kg
RL FOR ALL XRF ANALYSES WAS 25 mg/kg

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
EP-C-04-032
W.A.# 0 - 161

FIGURE 3B
SURFACE SOIL SAMPLING LOCATION MAP AND LEAD XRF/LABORATORY ANALYTICAL RESULTS
ADASE FIELD
JULY 2005
ROSELLE PARK YOUTH FIELDS
ROSELLE PARK, NEW JERSEY

12/15/05

J:/REAC4/161/FIGURE3B.DWG

	TRIP/LOT BLANK		AMBIENT AIR @ A-C3	
COMPOUND	RESULTS ppbv	RL ppbv	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U	0.160	1.48 J	0.160
TRICHLOROFLUROMETHANE	U	0.160	0.280 J	0.160
METHYLENE CHLORIDE	U	0.160	0.240 J	0.160
TRICHLOROMETHANE	U	0.160	U J	0.160
1,2,-DICHLOROETHANE	0.200	0.160	R	0.200
BENZENE	0.200	0.160	R	0.160
TOLUENE	0.640	0.160	R	1.28
TETRACHLOROETHYLENE	0.240	0.160	R	1.20
ETHYLBENZENE	0.880	0.160	U	0.160
META-XYLENE	0.920	0.160	U	0.920
ORTHO-XYLENE	0.880	0.160	U	0.160
STYRENE	0.680	0.160	U	0.160
1,3,5-TRIMETHYLBENZENE	0.560	0.160	U	0.160
1,2,4-TRIMETHYLBENZENE	0.480	0.160	U	0.160

A-C4 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	4.80
TRICHLOROFLUROMETHANE	U J	4.80
METHYLENE CHLORIDE	U J	4.80
TRICHLOROMETHANE	U J	4.80
1,2,-DICHLOROETHANE	6.00 J	4.80
BENZENE	152.0 J	4.80
TOLUENE	12.0 J	4.80
TETRACHLOROETHYLENE	U J	4.80
ETHYLBENZENE	60.0	4.80
META-XYLENE	91.2	4.80
ORTHO-XYLENE	12.0	4.80
STYRENE	7.20	4.80
1,3,5-TRIMETHYLBENZENE	215	4.80
1,2,4-TRIMETHYLBENZENE	331	4.80

A-C6 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	U J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	U J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	1.05 J	0.600
TOLUENE	U J	2.40
TETRACHLOROETHYLENE	U J	0.600
ETHYLBENZENE	U	0.600
META-XYLENE	U	0.600
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600

A-C3 SGS

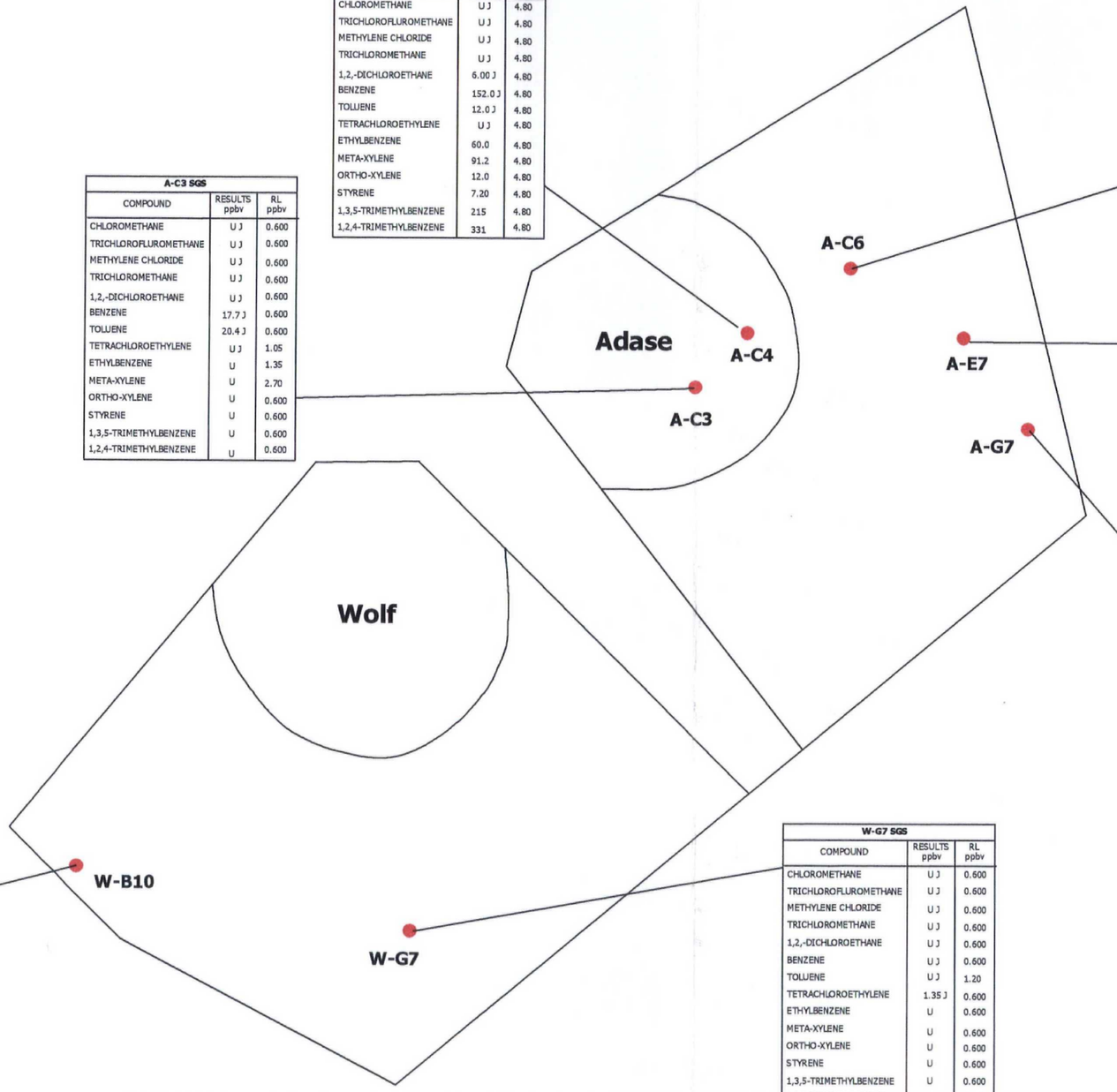
COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	U J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	U J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	17.7 J	0.600
TOLUENE	20.4 J	0.600
TETRACHLOROETHYLENE	U J	1.05
ETHYLBENZENE	U	1.35
META-XYLENE	U	2.70
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600

A-E7 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	U J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	3.00 J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	1.20 J	0.600
TOLUENE	4.80 J	0.600
TETRACHLOROETHYLENE	U J	0.600
ETHYLBENZENE	U	1.20
META-XYLENE	U	0.600
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600

A-G7 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	U J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	2.10 J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	2.40 J	0.600
TOLUENE	6.15 J	0.600
TETRACHLOROETHYLENE	5.70 J	0.600
ETHYLBENZENE	U	0.600
META-XYLENE	U	0.600
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600



W-B10 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	1.20 J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	U J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	2.25 J	0.600
TOLUENE	U J	2.40
TETRACHLOROETHYLENE	U J	1.20
ETHYLBENZENE	U	0.600
META-XYLENE	U	0.600
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600

W-G7 SGS

COMPOUND	RESULTS ppbv	RL ppbv
CHLOROMETHANE	U J	0.600
TRICHLOROFLUROMETHANE	U J	0.600
METHYLENE CHLORIDE	U J	0.600
TRICHLOROMETHANE	U J	0.600
1,2,-DICHLOROETHANE	U J	0.600
BENZENE	U J	0.600
TOLUENE	U J	1.20
TETRACHLOROETHYLENE	1.35 J	0.600
ETHYLBENZENE	U	0.600
META-XYLENE	U	0.600
ORTHO-XYLENE	U	0.600
STYRENE	U	0.600
1,3,5-TRIMETHYLBENZENE	U	0.600
1,2,4-TRIMETHYLBENZENE	U	0.600

LEGEND

W-G7 ● SOIL SAMPLE LOCATION

RL = REPORTING LIMIT

U = NOT DETECTED ABOVE RL; RL IS PRESENTED

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
EP-C-04-032
W.A.# 0 - 161

FIGURE 5
SOIL GAS (SUMMA)
SAMPLING LOCATION MAP
AND VOC ANALYTICAL RESULTS
JULY 2005
ROSELLE PARK YOUTH BASEBALL FIELDS
ROSELLE PARK, NEW JERSEY

12/20/05

J:/REAC4/161/DSC_REPORT_2005DEC/SG_Summa_DSCdwg

TABLE 1
SOIL ANALYTICAL RESULTS
COMPARISON OF XRF AND LABORATORY ANALYSES
JULY 2005

Sample Location	XRF Result	Lab Result
A-A5	72	NC
A-A6	97	NC
A-A7	132	NC
A-A8	62	NC
A-A9	56	NC
A-A10	72	87
A-B6	70	120
A-B7	123	450
A-B8	135	350
A-B9	76	310
A-B10	85	100
A-C6	93	240
A-C7	254	220
A-C8	137	370
A-C9	96	300
A-D5	97	NC
A-D6	146	NC
A-D7	112	NC
A-D8	118	NC
A-E1	113	NC
A-E4	260	NC
A-E5	249	NC
A-E6	208	NC
A-E7	176	NC
A-E8	139	NC
A-F1	194	NC
A-F2	181	NC
A-F3	377	NC
A-F4	414	NC
A-F5	302	NC
A-F6	241	NC
A-F7	253	NC
A-F8	155	NC
A-G1	293	NC
A-G2	318	NC
A-G3	206	NC
A-G4	321	NC
A-G5	232	NC
A-G6	183	NC
A-G7	178	NC
A-H1	250	NC
A-H2	333	NC
A-H3	228	NC
A-H4	305	NC
A-H5	231	NC
A-H6	121	NC
A-H7	113	NC
A-H10	283	NC
A-J1	90	NC
A-J2	335	NC
A-J3	369	NC
A-J4	236	NC
A-J5	283	NC
A-J6	135	NC
A-J7	133	NC
PW-1	68	NC
PW-2	67	NC
PW-3	62	NC
PW-4	109	110
PW-5	87	NC
PW-6	179	1000
PW-7	94	NC
PW-8	69	NC
RR-1	119	140
RR-2	296	NC
RR-3	188	NC
RR-4	254	NC
RR-5	264	240
RR-6	246	NC
RR-7	144	NC
RR-8	208	150
RR-9	66	NC
RR-10	162	NC
W-Dugout	36	NC
W-A5	572	NC
W-A6	258	NC
W-A7	776	1200
W-A9	820	NC
W-B7	587	NC
W-B8	969	1600
W-B9	382	NC
W-C6	815	250
W-C7	576	NC
W-C8	686	1000
W-D6	367	NC
W-D8	894	NC
W-D9	1120	NC
W-E1	107	NC
W-E5	239	340
W-E6	308	270
W-E7	489	NC
W-E8	721	NC
W-E9	1659	2600
W-F1	709	NC
W-F3	504	1200
W-F4	394	360
W-F6	361	NC
W-F7	548	NC
W-F8	719	NC
W-F9	2640	3700
W-G1	354	NC
W-G2	1020	1100
W-G5	631	800
W-G6	881	1000
W-G7	966	NC
W-G8	920	NC
W-G9	455	630
W-H2	1300	1600
W-H3	658	920
W-H5	1500	1600
W-H6	877	870
W-H7	1220	1300
W-H8	984	1200
W-J1	225	NC
W-J2	1000	1100
W-J4	790	830
W-X1	175	NC
W-X2	683	790
W-X3	482	NC
W-X4	706	NC
W-X5	2970	3100
W-X6	522	NC
W-X7	772	NC
W-X8	1410	1400
W-X9	243	NC
W-X10	552	640
W-X11	296	NC
W-X12	327	420
W-X13	378	NC
W-X14	490	NC
W-X15	1350	1600
W-X16	1230	1300

Samples containing PW-, RR-, and W- prefixes collected from Wolf Field and identified on Figure 3A. Samples containing A- prefix collected from Adase Field and identified on Figure 3B.

NC indicates sample for laboratory analysis was not collected.

TABLE 2
SOIL ANALYTICAL RESULTS
COMPARISON OF XRF AND LABORATORY ANALYSES
OCTOBER 2005

Sample Location	XRF Result	Lab Result
SB-A1TEMP(1-2)	390	NC
SB-A1TEMP(1-2)D	224	NC
SB-A1TEMP(2.5-3)	219	NC
SB-A1TEMP(2-2.5)	1220	NC
SB-A1TEMP(6-7)	55	51.7
SB-A2TEMP(1-2)	511	525
SB-A2TEMP(2-3)	767	NC
SB-A2TEMP(3-4)	114	NC
SB-A3TEMP(11-12)	25	NC
SB-A3TEMP(2-3)	193	207
SB-A3TEMP(3-4)	532	NC
SB-A3TEMP(3-4)	427	NC
SB-A3TEMP(6-7)	25	NC
SB-A3TEMP(9-10)	25	NC
SB-WB8(1-2)	2280	1690
SB-WB8(2-3)	3390	NC
SB-WB8(5-6)	252	NC
SB-WB8(7-8)	25	NC
SB-WE6(1.5-2)	29	15.6
SB-WE6(1-1.5)	71	NC
SB-WE6(3-4)	674	691
SB-WE6(3-4)D	693	717
SB-WE6(5-6)	75	NC
SB-WE6(7-8)	25	NC
SB-WE6(7-8)	25	NC
SB-WF3(1-2)	2150	3140
SB-WF3(2-3)	445	NC
SB-WF3(5-6)	49	NC
SB-WF3(5-6)D	43	NC
SB-WF3(5-6)D	37	NC

Sample Location	XRF Result	Lab Result
SB-WF3(7-8)	25	NC
SB-WF9(2-3)	538	NC
SB-WF9(5-6)	120	98.7
SB-WF9(6-7)	25	NC
SB-WH2(2-3)	2430	NC
SB-WH2(3-4)	1780	1660
SB-WH2(3-4)D	1260	NC
SB-WH2(5-6)	58	NC
SB-WH8(1-2)	2580	3410
SB-WH8(1-2)	2240	NC
SB-WH8(1-2)D	2260	NC
SB-WH8(2-3)	1590	NC
SB-WH8(3-4)	153	NC
SB-WH8(4-5)	549	NC
SB-WH8(6-7)	25	NC
SB-WIF(1-2)	77	NC
SB-WIF(2-3)	520	NC
SB-WIF(2-3)D	1180	NC
SB-WIF(3-4)	120	NC
SB-WIF(4-5)	1210	1320
SB-WIF(5-6)	87	NC
SB-WIF(5-6)	73	NC
SB-WIF(5-6)D	52	NC
SB-WX15(1-2)	6320	14900
SB-WX15(2-3)	2120	NC
SB-WX15(3-4)	1090	1040
SB-WX15(3-4)	998	NC
SB-WX5(2-3)	8070	11000
SB-WX5(3-4)	3740	NC
SB-WX5(5-6)	48	NC

All samples represented on Figure 4.

Depth interval from where sample collected in each boring presented in parentheses.

NC indicates sample for laboratory analysis was not collected.

TABLE 3
VOC ANALYTICAL RESULTS

SOIL GAS SAMPLES
JULY 2005

Sample Location	A-C4SG			Ambient Air @A-C3			W-C2 SGS			A-G7 SGS		
Container Type	Tedlar			Summa			Summa			Summa		
Compound	Result ppmv		RL ppmv	Result ppbv		RL ppbv	Result ppbv		RL ppbv	Result ppbv		RL ppbv
CHLOROMETHANE	U		0.2	1.48	J	0.160	U	J	0.600	U	J	0.600
TRICHLOROFLUROMETHANE	U		0.2	0.280	J	0.160	U	J	0.600	U	J	0.600
METHYLENE CHLORIDE	U		0.2	0.240	J	0.160	U	J	0.600	U	J	0.600
TRICHLOROMETHANE	U		0.2	U	J	0.160	U	J	0.600	2.10	J	0.600
1,2-DICHLOROETHANE	0.33		0.200	R		0.200	U	J	0.600	U	J	0.600
BENZENE	U		0.2	R		0.160	U	J	0.600	2.40	J	0.600
TOLUENE	U		0.2	R		1.28	U	J	0.600	6.15	J	0.600
TETRACHLOROETHYLENE	U		0.20	R		1.20	U	J	1.20	5.70	J	0.600
ETHYLBENZENE	U		0.2	U		0.160	U		0.600	U		0.600
META-XYLENE	U		0.200	U		0.920	U		0.600	U		0.600
ORTHO-XYLENE	U		0.2	U		0.160	U		0.600	U		0.600
STYRENE	U		0.2	U		0.160	U		0.600	U		0.600
1,3,5-TRIMETHYLBENZENE	0.11	J	0.2	U		0.160	U		0.600	U		0.600
1,2,4-TRIMETHYLBENZENE	0.15	J	0.2	U		0.160	U		0.600	U		0.600

ppbv = parts per billion by volume

ppbm = parts per million by volume

Soil sample location identified on Figure 4; soil gas sample locations identified on Figure 5.

Only compounds detected above the reporting limit (RL) presented in this table.

"J" indicates result was detected below reporting limit (RL) and was estimated
"U" indicates compound not detected above quantitation limit
"R" indicates the result was rejected due to problems identified during data review

TABLE 3
VOC ANALYTICAL RESULTS

SOIL GAS SAMPLES
JULY 2005

Sample Location	A-C3 SGS			A-E7 SGS			A-C6 SGS			W-B10 SGS		
Container Type	Summa			Summa			Summa			Summa		
Compound	Result ppbv		RL ppbv	Result ppbv		RL ppbv	Result ppbv		RL ppbv	Result ppbv		RL ppbv
CHLOROMETHANE	U	J	0.600	U	J	0.600	U	J	0.600	U	J	0.600
TRICHLOROFLUROMETHANE	U	J	0.600	U	J	0.600	U	J	0.600	1.20	J	0.600
METHYLENE CHLORIDE	U	J	0.600	U	J	0.600	U	J	0.600	U	J	0.600
TRICHLOROMETHANE	U	J	0.600	3.00	J	0.600	U	J	0.600	U	J	0.600
1,2-DICHLOROETHANE	U	J	0.600	U	J	0.600	U	J	0.600	U	J	0.600
BENZENE	17.7	J	0.600	1.20	J	0.600	1.05	J	0.600	2.25	J	0.600
TOLUENE	20.4	J	0.600	4.80	J	0.600	U	J	2.40	U	J	2.40
TETRACHLOROETHYLENE	U	J	1.05	U	J	1.20	U	J	0.600	U	J	1.20
ETHYLBENZENE	U		1.35	U		0.600	U		0.600	U		0.600
META-XYLENE	U		2.70	U		0.920	U		0.600	U		0.600
ORTHO-XYLENE	U		0.600	U		0.600	U		0.600	U		0.600
STYRENE	U		0.600	U		0.600	U		0.600	U		0.600
1,3,5-TRIMETHYLBENZENE	U		0.600	U		0.600	U		0.600	U		0.600
1,2,4-TRIMETHYLBENZENE	U		0.600	U		0.600	U		0.600	U		0.600

ppbv = parts per billion by volume

ppbm = parts per million by volume

Soil sample location identified on Figure 4; soil gas sample locations identified on Figure 5.

Only compounds detected above the reporting limit (RL) presented in this table.

"J" indicates result was detected below reporting limit (RL) and was estimated
"U" indicates compound not detected above quantitation limit
"R" indicates the result was rejected due to problems identified during data review

TABLE 3
VOC ANALYTICAL RESULTS

SOIL GAS SAMPLES
JULY 2005

Sample Location	W-G7 SGS			A-C5 SGS			A-C4 SGS		
Container Type	Summa			Summa			Summa		
Compound	Result ppbv		RL ppbv	Result ppbv		RL ppbv	Result ppbv		RL ppbv
CHLOROMETHANE	U	J	0.600	U	J	3.00	U	J	4.80
TRICHLOROFLUROMETHANE	U	J	0.600	U	J	3.00	U	J	4.80
METHYLENE CHLORIDE	U	J	0.600	U	J	3.00	U	J	4.80
TRICHLOROMETHANE	U	J	0.600	U	J	3.00	U	J	4.80
1,2-DICHLOROETHANE	U	J	0.600	U	J	3.00	6.00	J	4.80
BENZENE	U	J	0.600	U	J	3.00	152	J	4.80
TOLUENE	U	J	1.20	U	J	3.00	12.0	J	4.80
TETRACHLOROETHYLENE	1.35	J	0.600	U	J	3.00	U	J	4.80
ETHYLBENZENE	U		0.600	U		3.00	60.0		4.80
META-XYLENE	U		0.600	U		3.00	91.2		4.80
ORTHO-XYLENE	U		0.600	U		3.00	12.0		4.80
STYRENE	U		0.600	U		3.00	7.20		4.80
1,3,5-TRIMETHYLBENZENE	U		0.600	U		3.00	215		4.80
1,2,4-TRIMETHYLBENZENE	U		0.600	U		3.00	331		4.80

ppbv = parts per billion by volume

ppbm = parts per million by volume

Soil sample location identified on Figure 4; soil gas sample locations identified on Figure 5.

Only compounds detected above the reporting limit (RL) presented in this table.

"J" indicates result was detected below reporting limit (RL) and was estimated
"U" indicates compound not detected above quantitation limit
"R" indicates the result was rejected due to problems identified during data review

TABLE 3
VOC ANALYTICAL RESULTS

SOIL SAMPLES
OCTOBER 2005

	SB-A3TEMP							
Depth:	11-12 Dup.		6-7		9-10		11-12	
Compound	Conc.	RL	Conc.	RL	Conc.	RL	Conc.	RL
Methylene Chloride	U	5950	U	1600	138	116	U	5950
Toluene	14000	5950	U	1600	U	116	79000	5950
Ethylbenzene	23200	5950	5860	1600	301	116	45000	5950
p&m-Xylene	88800	11900	6190	3210	648	233	178000	11900
o-Xylene	30600	5950	U	1600	88.5 J	116	73800	5950
Isopropylbenzene	3100 J	5950	3050	1600	67.8 J	116	5980	5950
n-Propylbenzene	10800	5950	12000	1600	266	116	20800	5950
1,3,5-Trimethylbenzene	18700	5950	U	1600	206	116	34500	5950
1,2,4-Trimethylbenzene	66800	5950	47800	1600	1650	116	124000	5950
p-Isopropyltoluene	U	5950	1240 J	1600	U	116	U	5950
Naphthalene	7130	5950	7270	1600	359	116	21800	5950

All results presented in micrograms per kilogram.

Soil sample location identified on Figure 4; soil gas sample locations identified on Figure 5.

Only compounds detected above the reporting limit (RL) presented in this table.

"J" indicates result was detected below reporting limit (RL) and was estimated
"U" indicates compound not detected above quantitation limit
"R" indicates the result was rejected due to problems identified during data review